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THIS IS UNEVALUATED INFORMATION

Dr. Paul Goerlich, infrared expert, formerly of Zeiss-Ikon, Dresden, is now working in a research institute in Moscow.<sup>1</sup> He is engaged in the study of the photoelectric properties of infrared resistance cells. Goerlich has been studying the infrared sensitivity of lead sulfide (PbS), lead selenide (PbSe), lead telluride (PbTe), cadmium sulfide (CdS), cadmium selenide (CdSe), and cadmium telluride (CdTe) cells. These cells are used in the detection of far-infrared radiation. The main object of these investigations is to produce cells that will have useful military applications. From the nature of Goerlich's work the Soviets are investigating the development of infrared guided missiles.

[redacted] the Russians have become increasingly active in the field of infrared research. They are intensively studying samarium, cerium, praseodymium, and europium activated alkaline earth phosphors, and their work has been excellent. Recently, the Russians have developed a cuprous oxide ( $\text{Cu}_2\text{O}$ ) phosphor which shows intensive luminescence in the near infrared (0.9u) region. It is excited by visible light, an advantage over most phosphors which must be excited by ultraviolet light, radioactive rays, or x-rays. This cuprous oxide phosphor is prepared by the dry oxidation of copper. It shows no luminescence if prepared wet.

3. Work is also being done on doubly activated phosphors of the earth and alkaline earth metal sulfides.<sup>2</sup> Samarium is used as the one activator throughout and cerium, praseodymium, europium, or manganese is used as the second. This research is being conducted to determine which pair produces the most efficient infrared detecting phosphor.

4. The Russian scientists most prominent in the infrared field are V. Ye. Lashkarev, K. M. Kosonogova, and S. Vasilyev. A German scientist working for the Soviets who also stands out in this field is Dr. Peter Brauer.

1. Comment: Goerlich returned to Zeiss/Jena from Moscow in the summer of 1952. He is reportedly director of research at Zeiss and a full professor at the University of Jena. He is said to be slated to receive a Staatspreis from the DDR government.

2. Comment: It is believed that this reference is to metal sulfides and rare earth sulfides.

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